

The Examiner rejected claims 12-15 and 17-19 under 35 U.S.C. § 112, second paragraph. The Examiner believed that these claims were indefinite.

Regarding claim 12, the Examiner stated that the "means for coupling lacks connecting structure with the means for generating." Applicants submit that the recitation of "means for coupling" being in "means plus function" language does not require a recitation of structure. The sixth paragraph of Section 112 expressly provides "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure...." (Emphasis added) Applicants thus submit that claim 12 is definite under Section 112, second paragraph.

Regarding claim 13, the Examiner stated that "the first and second outputs of the generating means lack antecedent basis." The Examiner also stated that it was improper to claim the "electrodes being implanted" because it was improper to claim the body. Applicants have amended claim 13 so that it now recites "the output of the generating means has first and second oppositely polarized output terminals," and have deleted the recitation of "the first and second electrodes being implanted on opposite sides of a lesion in the central nervous system." Applicants submit that amended claim 13 satisfies the strictures of Section 112, second paragraph.

Regarding claim 17, applicants have amended it to delete the recitation of the electrodes being implanted in the body of the mammal on opposite sides of the lesion to which the Examiner objected. Consequently, applicants submit that claim 17 as amended now satisfies the strictures of Section 112, second paragraph.

Applicants have cancelled claims 14, 15, 18 and 19. Consequently, the rejection of these claims under Section 112, second paragraph is rendered moot.

The Examiner rejected claims 1, 2, 4, 5, 7, 9, 10, 12-14 and 16-18 under 35 U.S.C. § 103. To support this rejection, the Examiner cited Bentall et al., U.S. 4,611,599.

Applicants have amended independent claim 1 so that it now recites "wherein the electrical field's polarity reversal period is less than about sixty minutes which is less than a die back period of anodally facing axons in the central nervous system and more than about thirty seconds which is long enough to stimulate growth of cathodally facing axons in the central nervous system." Applicants submit that as amended, claim 1 is patentable over Bentall et al.

Bentall et al. does not disclose or suggest the method for stimulating nerves in the central nervous system of a mammal as now recited in amended claim 1. Rather, Bentall et al. discloses applying an R.F. electromagnetic field to living tissue to promote healing thereof that does not produce any significant tissue heating. According to Bentall et al., the R.F. field may itself be pulsed serving as an example producing pulses 100 microseconds wide at intervals of 1 microsecond where the operative period of the field applying means defined by the timing means are significantly longer than such pulse periods, for example several hours. [See, Bentall et al., col. 2, lines 10-15] Applicants submit that Bentall et al. does not disclose or suggest the method of amended claim 1.

Applicants have amended independent claim 4 so that it now recites in pertinent part, "wherein the oscillating electrical field's polarity reversal period is long enough to stimulate

growth of cathodally facing axons in the spinal cord but is less than a die back period of anodally facing axons in the spinal cord." Bentall et al. does not disclose or suggest such a method. As discussed, Bentall et al. discloses applying an R.F. field to the body. No mention is made of applying such a field to the spinal cord and there is no disclosure in Bentall et al. that the polarity reversal period of the oscillating electrical field must be long enough to stimulate growth of cathodally facing axons in the spinal cord but be less than a die back period of anodally facing axons in the spinal cord. Applicants submit that amended claim 4 is thus patentable over Bentall et al.

Applicants have amended independent claim 7 so that it now recites in pertinent part, "generating an oscillating electrical field that has a polarity reversal period in the range of about thirty seconds to about sixty minutes." Applicants have also amended independent claim 9 so that it now recites "reversing the polarity of the DC stimulus after a predetermined period of time which is in the range of about thirty seconds to about sixty minutes." Applicants have also amended independent claim 16 so that it now recites in pertinent part, "the predetermined time period being in the range of about thirty seconds to about sixty minutes." For much the same reasons discussed with respect to amended claim 1, applicants submit that as amended, claims 7, 9 and 16 are patentable over Bentall et al.

Applicants have also amended independent claim 12 so that it now recites, "generating an oscillating electrical field which has a polarity reversal period long enough to stimulate growth of cathodally facing axons of the nerves to be stimulated but less than a die back period of anodally facing axons of the nerves to be stimulated." For much the same reasons as

discussed with respect to amended claim 4, applicants submit that amended claim 12 is patentable over Bentall et al.

Claim 10 depends from claim 9 and is patentable over Bentall et al. for at least the same reasons that claim 9 is.

Amended claims 13 and 15 depend directly or indirectly from independent claim 12. Consequently, they are patentable over Bentall et al. for at least the same reasons as claim 12.

Amended claim 17 depends from independent claim 16. Thus, it is patentable over Bentall et al. for at least the same reasons as claim 16.

Applicants have cancelled claims 2, 5, 14 and 18. The Section 103 rejection of these claims are thus rendered moot.

Applicants also note that claims 3, 6, 8, and 20 apparently were not rejected on any basis. Applicants note, however, that the amendments to claims 1, 7, and 9 incorporate the limitations of claims 3, 8 and 11, respectively. Claims 3, 8 and 11 were thus cancelled. Claim 6 was amended to depend from claim 4. Claim 20 was also cancelled.

In conclusions, for the reasons discussed above, applicants submit that claims 1, 4, 6, 7, 9, 10, 12, 13 and 15-17 as they now stand are allowable. Applicants respectfully request reconsideration in the early notice of allowance of these claims.

Please credit any overpayments or charge any additional fees to the Deposit Account of Barnes & Thornburg, Account Number 02-1010.

Respectfully submitted,

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